

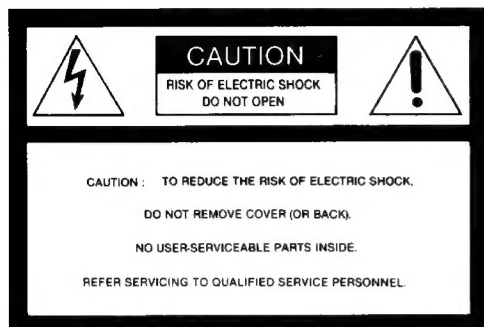
Stereo Cassette Deck

Operating Instructions

TC-WR80ES

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

* The graphical symbols are on the rear enclosure.

Owner's Record

The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. TC-WR80ES Serial No. _____

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the equipment with respect to the receiver

Move the equipment away from the receiver

Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

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Features

- **The Dolby HX PRO* system** which improves the linearity of a tape's high-range response during recording.
- **Automatic tape type detection** during playback and recording.
- **A relay function** for long playback.
- **Auto-synchro dubbing** at normal or high (double) speed.
- **AMS and memory play functions** which provide easy access to desired selections.
- **An easy-to-read linear counter** which shows the elapsed recording or playback time for decks A and B.

*Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Precautions

On safety

- This unit operates on 120 V AC, 60 Hz only.
- Should anything fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it will not be used for a long time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.

On operation

- When the unit is not used, turn the power off to conserve energy and to extend the useful life of your unit.
- Because of the safety mechanism, the function buttons will not operate if the cassette holder is not completely closed, if there is no cassette in the cassette holder, or if a cassette has been incorrectly inserted into the cassette holder.

On head cleaning

The head and tape path should be cleaned after every 10 hours of operation. Dirty heads and a dirty tape path may cause:

- loss of high-frequency response
- loss of sound volume
- sound drop-out

Note on cassettes longer than 90 minutes

The use of cassettes longer than 90 minutes is not recommended except for long continuous playback.

If you have any questions or problems concerning your unit, please contact your nearest Sony dealer.

For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS."

Installation

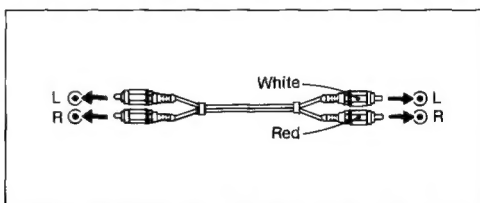
Notes on Installation

- Place the unit with the front panel facing you in a location with adequate air circulation to prevent internal heat build-up in the unit.
- Do not place the unit:
 - near heat sources such as radiators or air ducts.
 - in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
 - in an inclined position.
 - on a soft surface, such as a rug, that would block the ventilation holes on the bottom.
- Do not throw away the carton and packing material. They will come in handy when transporting the unit or shipping it for servicing.

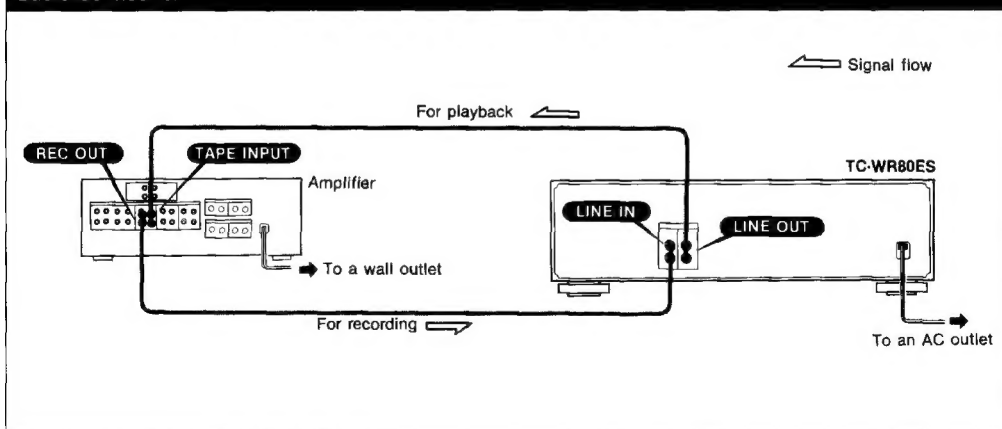
Connections

Notes on Connections

- Turn off the power to all equipment to be connected before making any connection.
- Note that the red plug of the supplied connecting cord is for right-channel (R) connection and the white plug for left-channel (L) connection.
- The connecting cords should be fully inserted into the jacks. A loose connection may cause hum pickup.

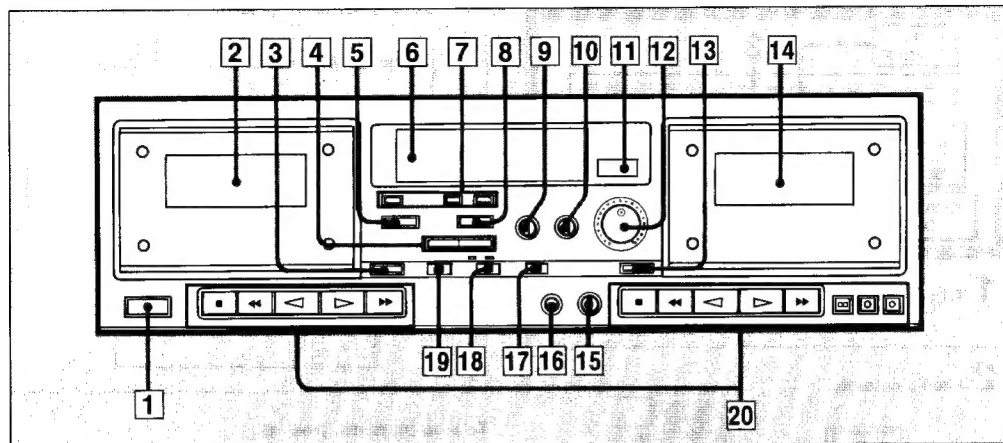


Basic Connection



Identification of Front Panel Parts

Refer to the page number indicated in ● for details.



1 POWER switch

2 Cassette holder (deck A)

3 ▲ eject button (deck A)

4 SYNCHRO DUBBING buttons ⑩
HIGH SPEED button
NORM (normal) SPEED button

5 BLANK SKIP button ④

6 Display panel

7 COUNTER buttons ⑩
A/B (deck A/B) selector
RESET button
MEMORY button



8 AUTO PAUSE button ⑩

9 BIAS control (deck B) ⑫

10 BALANCE control ①

11 Remote control sensor

You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark.

12 REC (recording) LEVEL control ① ⑫

13 ▲ eject button (deck B)

14 Cassette holder (deck B)

15 Headphone LEVEL control

16 PHONES (headphones) jack (stereo phone jack)

17  NR (Dolby noise reduction) switch ⑤ ⑪ ⑮

18 DIR (direction) MODE switch ⑤ ① ⑪

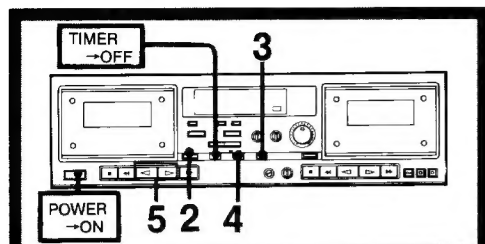
19 TIMER switch ①

20 Tape operation buttons

- (stop) button
- ◀◀ (leftward fast winding) button
- ◀ (reverse play) button
- ▶ (forward play) button
- ▶▶ (rightward fast winding) button
- || PAUSE button
- REC MUTE (record muting) button ⑮
- REC (recording) button

Playing Back

Follow the procedure below to play back a cassette on deck A or B.



1 Turn on the amplifier and select the tape function.

2 Insert a cassette.



3 Set the (Dolby) NR switch to the same position that was used when the cassette was recorded.



4 Select the direction mode.

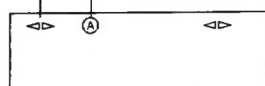
To play back to the end of one side only	
To play back both sides continuously*	

* After playing back five times, the deck automatically stops.

5 Start playback.

From the front side	
From the reverse side	

Deck in playback mode
Tape direction



To stop playback, press

To stop playback momentarily, press

To restart play, press , , or .

To fastwind a tape rightward, press .

To fastwind a tape leftward, press .

The TIMER switch must be set to OFF

Otherwise, recording or playback will start automatically when the power is turned on.

What is the Dolby NR system?

The Dolby NR (noise reduction) system reduces tape hiss noise in low-level, high-frequency signals by boosting the signals during recording and lowering them during playback.

Is it necessary to set the tape type being used?

No. The deck has an automatic tape type detection system. You can use Type I (normal), Type II (CrO₂) and Type IV (metal). The tape detection system automatically adjusts the equalization and bias current to the optimum level for the type of cassette detected.

When decks A and B are in playback mode

Only playback from deck A will be audible.

If fast winding starts in the middle of a selection

The Blank Skip function (page 8) is activated (the BLANK SKIP indicator is on). Press the BLANK SKIP button to turn off the BLANK SKIP indicator.

Note

The Dolby HX PRO system is effective only during recording, and not during playback.

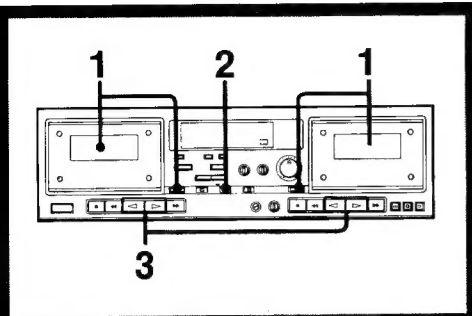
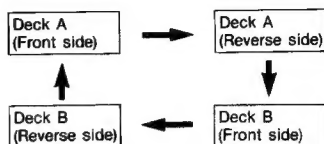
Playing Back Both Decks in Succession—Relay Play

The Relay Play function plays back cassettes in deck A and deck B continuously and in consecutive order.

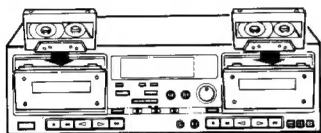
To stop relay play, press ■ of the deck playing.

Playback sequence of relay play

Relay play always follows the sequence below regardless of where playback starts. After playing back five times, the deck automatically stops.



- 1** Insert cassettes into both decks.



- 2** Set the direction mode to RELAY.



- 3** Start playback of the cassette to be listened to first.

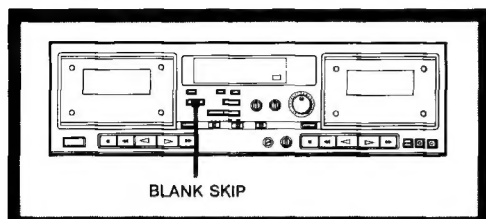
From the front side	
From the reverse side	

Playing back more than two cassettes in succession

Replacing cassettes that have finished playing with new ones allows you to play back two or more cassettes alternately on each deck.

Skipping Blanks—Blank Skip

The Blank Skip function fast winds the cassette when a blank space of ten seconds or more is encountered, then resumes playback when a recorded portion is detected.



Activate the Blank Skip function.

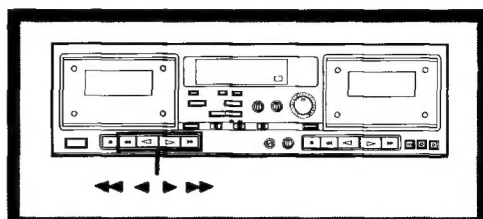
BLANK SKIP



BLANK SKIP

Starting Playback Automatically After Fast Winding—Auto Play

The Auto Play function automatically starts playing back a cassette after fast winding it to the beginning.



Start Auto Play.

From the beginning of the front side:

Press ►, and ◀◀

From the beginning of the reverse side:

Press ◀◀, and ►►

To deactivate the Blank Skip function

Press the BLANK SKIP button, turning off the BLANK SKIP indicator.

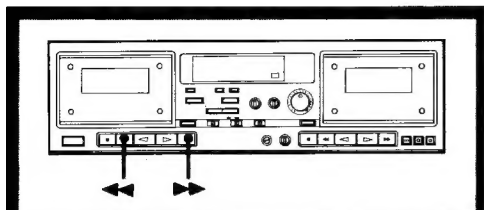
If a cassette begins playing back before reaching the beginning

The Memory Play function is activated. Press the MEMORY button to turn off the MEMORY indicator.

Locating a Selection

—Automatic Music Sensor (AMS)

The AMS function detects the blank space between selections, allowing you to quickly locate the beginning of desired selections.



During playback, check the direction indicator and press ►► or ◄◄, referring to the following table.

Indicator	Desired selection	
	Next selection	Selection being played
▷ PLAY	►►	◄◄
◁ PLAY	◄◄	►►

The PLAY indicator blinks while the AMS searches for the beginning of the selection. After locating the beginning of the selection, playback will start automatically.

The AMS may skip a selection

- If the ►► button is pressed immediately before the following selection.
- If there is noise in the space between selections.
- If the space is less than four seconds long.

The AMS will treat the following as blanks:

- a long pause in the music
- a passage of low frequencies or very low volume
- a gradual increase or decrease in volume

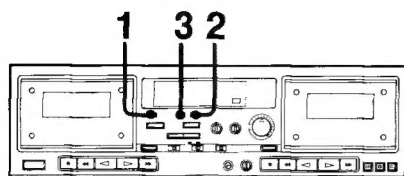
The AMS does not function on both decks simultaneously

- The AMS is activated for the deck whose ►► or ◄◄ button is pressed first.
- If the AMS is activated for deck B during playback on deck A, deck B fast winds to the beginning of the selection and stops.
- If the AMS is activated for deck A during playback on deck B, deck A fast winds to the beginning of the selection and begins playback. The sound from deck B will be cut off when playback begins on deck A.

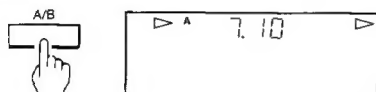
Locating a Desired Position Using the Counter

—Memory Play

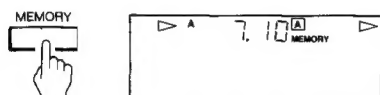
The Memory Play function allows you to use the counter to record a desired position on a cassette for fast relocation and automatic playback later.



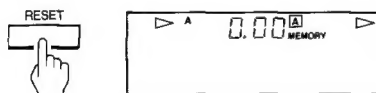
- 1 Select the deck in which the desired cassette is inserted.



- 2 Activate the Memory function.



- 3 At the desired position, reset the counter.



To return to the desired position

Direction Indicator	Operation
▶ PLAY	Press ▶ and ◀◀
◀ PLAY	Press ◀◀ and ▶▶

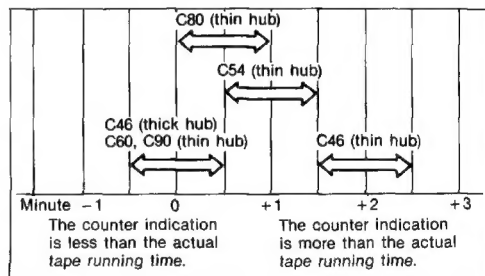
If you press only the ◀◀ or ▶▶ button, the tape will be rewound and the unit will stop when the counter reaches 0.00 (Memory stop).

To deactivate the Memory Play function

Press the MEMORY button, turning off the MEMORY indicator.

The Accuracy of the Digital Linear Counter

This counter is not a digital clock, and thus the indicated number will not exactly equal the actual elapsed time. The difference between the number and the elapsed time will vary depending on the type of tape being used. This counter was designed using Sony cassette tapes as a standard. You may want to check the accuracy of the counter when using cassettes tapes other than Sony's or tapes of a special length.

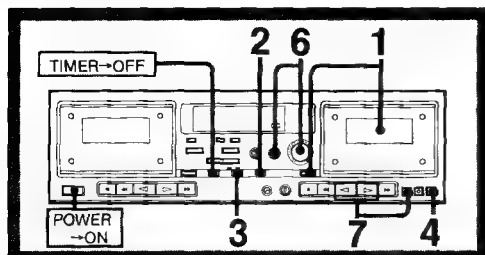


Do not turn off the power while using the counter

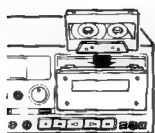
Turning the power off, then on again resets the counter to 0.00 and changes the counter display to that of deck A.

Recording

Follow the procedure below to record a source on a cassette (deck B only).



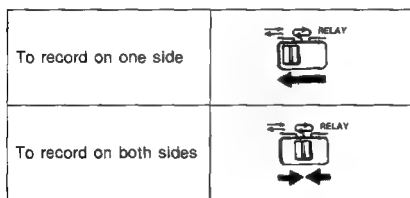
1 Insert a cassette.



2 Select the Dober NR setting.



3 Select the side(s) to be recorded.



4 Place the unit into recording standby mode.



5 Play the program source to be recorded.

6 Adjust the recording level and balance.



See Adjusting the Recording Level on page 12.

7 Start recording.

To record on the front side of the cassette

When > is on	Press > once or
When < is on	Press > twice

To record on the reverse side of the cassette

When < is on	Press < once or
When > is on	Press < twice

To stop recording, press ■.

Note on step 3

Even at the ▼ position, recording automatically stops when the tape reaches the end of reverse side.

Note on step 4

A blinking < or > indicator indicates that recording is possible on that side.

If the cassette tab has been removed to prevent accidental erasure, the indicator for that side will not blink.

Note on step 7

Pressing < or > twice will cause the unit first to change tape direction and then start recording in that direction.

The ▲ button is inoperative during recording

When the unit is recording or in record pause mode, the ▲ button will be disabled. To open the cassette holder, press ■ or || first.

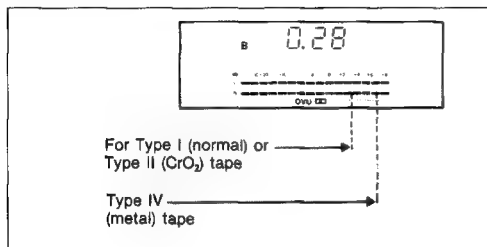
Recording

Adjusting the Recording Level

The optimum recording level, which differs according to the tape type, is indicated on the Peak Level Meter for each tape type.

Adjust the REC LEVEL control as high as possible without exceeding the recommended range for the tape type being used.

Recommended maximum PEAK LEVEL METER reading

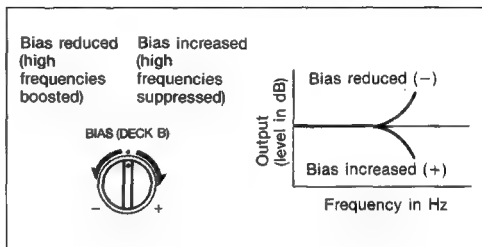


Tips on recording level adjustment

- If the recording level setting is too high, the recording will be distorted; if it is too low, the tape will produce a hissing sound. Therefore, the recording level should be set as high as possible without causing distortion.
- If the program source to be recorded has many high frequency signals, set the level to a relatively low position.

Making an Optimum Recording According to the Tape Type—Bias Adjustment (deck B only)

To obtain the optimum frequency response, use the BIAS control to adjust the bias current according to the tape type being used. Reducing the bias boosts high frequencies but increases distortion. Increasing the bias decreases distortion but suppresses high frequencies. Balance the bias according to your listening preference.

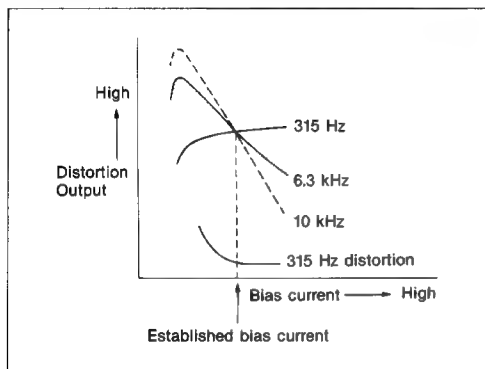


Note

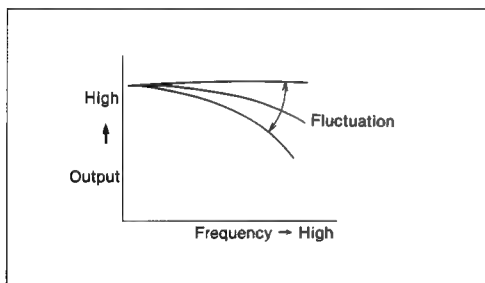
In the case of type IV cassette tapes, the frequency change for any given bias setting will be minimal.

What is the Dolby HX PRO system?

The Dolby HX PRO system provides improved linearity in high-range frequency response during recording. Tapes recorded with this system retain the same high quality even when played back on other tape decks.



As shown above, characteristics such as output level and distortion differ widely according to the bias (high-frequency) current. In conventional systems, the bias current is susceptible to variations in certain recording signals (see diagram below) which may cause fluctuations in frequency response, distortion, or other unwanted characteristics.

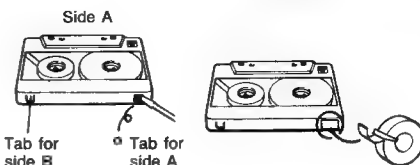


With the Dolby HX PRO system, the effective bias is controlled in millisecond units to greatly reduce distortion, improving linearity in high-range response and ensuring high-intensity recording with minimal distortion and noise.

Notes on Cassettes

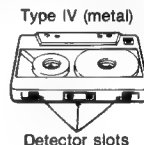
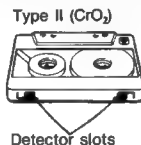
To protect a recording on side A or B
Break out the respective tab.

To recover a cassette for recording
Cover the respective slot with tape.



When using Type II (CrO₂) or Type IV (metal) cassettes

Be careful not to cover the detector slots which are necessary for automatic tape type detection.



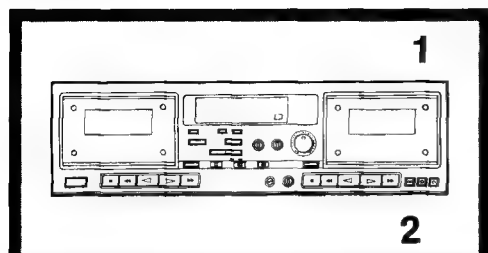
Cassette care

- Avoid touching the tape surface of a cassette to prevent contamination of the heads by dirt, dust, or oil on the skin.
- Keep cassettes away from equipment with magnets, such as speakers and amplifiers, as erasure or distortion of the recorded tape could occur.
- Do not expose cassettes to direct sunlight, extremely cold temperatures, or moisture.

Inserting a Blank Space during Recording


—Record Muting

The Record Muting function allows you to insert a four-second blank to enable proper AMS operation (see page 9), and to replace unwanted input with a blank of any desired length.



- 1** While recording, press  and release it immediately.





The REC indicator will start to blink. During this time, no incoming signals are recorded on the tape. After four seconds, the  indicator lights up and the unit enters the recording pause mode.

- 2** Press  to resume recording.

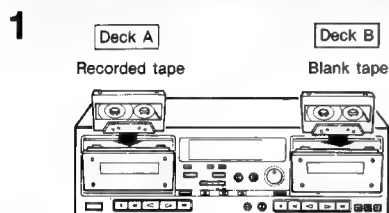
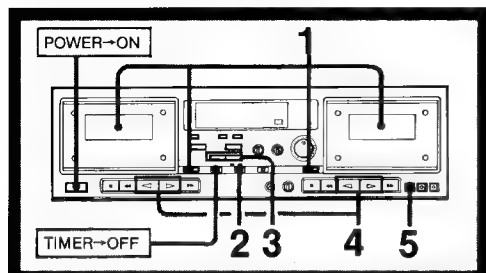


To create a blank longer than four seconds, press  for the desired length of time.

After four seconds, the REC indicator will blink with greater rapidity. When you release , the  indicator lights up and the unit goes into the recording pause mode.

Dubbing a Tape

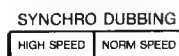
High-speed dubbing allows you to dub a tape in deck A to a tape in deck B without making adjustments. High-speed dubbing is convenient for dubbing entire tapes while normal-speed dubbing is handy for tape editing.



2 Select the direction mode.

One side	
Both sides	Dubbing of the reverse side starts independently of deck A.
	Dubbing of the reverse side starts simultaneously with deck A.

3 Select the dubbing speed.



4 Select the side on which to start dubbing.

From the front side	
From the reverse side	

5 Start dubbing.



To stop dubbing

During normal-speed dubbing, press on deck B.
During high-speed dubbing, press on either deck A or B.

During high-speed dubbing

Only the button is operative.

If HIGH or NORM blinks three times

Either one or both tabs of the cassette inserted into deck B have been removed, making dubbing impossible for that side. Cover the slot(s) with tape (see page 13).

Is it necessary to adjust the recording level and select the Dolby NR system?

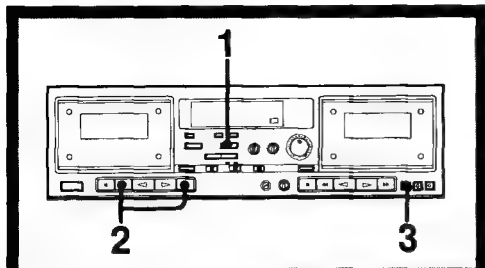
It is unnecessary during high-speed dubbing since the tape in deck B is automatically recorded with the same recording level and Dolby noise reduction system as the original in deck A. The tape type and Dolby system must, however, be set to match the tape in deck A during normal-speed dubbing when the sound is monitored.

Using the Blank Skip function during normal-speed dubbing

Pressing the BLANK SKIP button will activate the Blank Skip function and turn on the BLANK SKIP indicator. When a blank of ten seconds or more is encountered, dubbing will stop while the unit fast forwards to the next recorded section. When one is found, dubbing resumes.

Dubbing only Desired Selections

Follow the procedure below to dub from the beginning of desired selections. Note that this is possible only in the normal-speed dubbing mode.



- 1** Press the AUTO PAUSE button during normal-speed dubbing.

AUTO PAUSE



Each time one playback selection on deck A ends, deck A goes into the pause mode and deck B goes into the recording pause mode.

- 2** Locate the desired selection (page 9).

Deck A



or



- 3** To Resume dubbing

Deck B

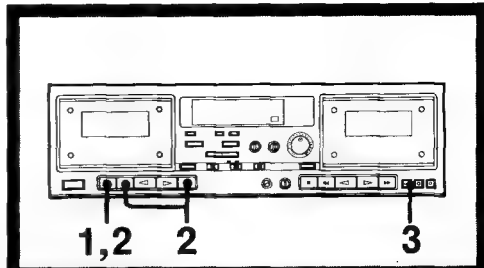


To release the Auto Pause function
Press the AUTO PAUSE button again.

The Auto Pause function will not operate
when the space between selections is too short or contains noise.

Dubbing only Desired Portions

Follow the procedure below to dub only desired portions of selections. Note that this is possible only in the normal-speed dubbing mode.



- 1** At the start of a section to be skipped:

Deck A



Deck A enters the stop mode and deck B enters the recording pause mode.

- 2** Locate the desired portion.

Deck A



or



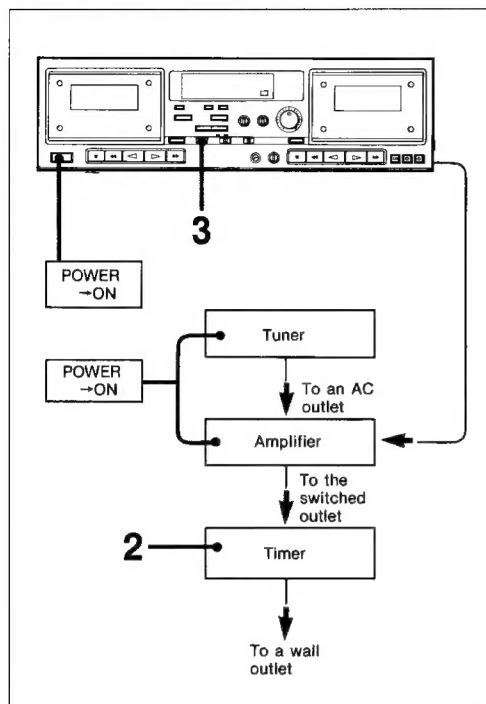
- 3** Resume dubbing

Deck B



Timer-Activated Playback and Recording

By connecting a commercially available timer, automatic recording or playback can be performed at a preset time.



1 Prepare the equipment for playback or recording.

To playback	Set the amplifier's input selector to tape monitor. For single deck playback, insert a cassette into deck B. For relay play, insert cassettes into both decks, and set the direction mode to RELAY.
To record	Perform steps 1 through 6 on page 11.

2 Set the timer to the desired time.

The power of the tape deck will be cut off.

3 Set the unit's TIMER switch to PLAY or REC.

Playback or recording will start at the preset time.

When the timer-activated operation is completed

Set the TIMER switch on the unit to OFF. If the TIMER switch is left at REC, the unit will automatically enter the recording mode the next time the power is turned on, and the previously recorded material may be erased.

Keep the POWER switch depressed on the tape deck

When the timer is set, the power of the deck will be cut off. However, the POWER switch must be depressed to start the timer-activated operation.

Check the direction mode indicator

Timer-activated operations start from the side of the cassette being used when the power was turned off. However, for recording or relay play, recording or playback on deck B always starts from the front side.

For single deck playback, use deck B.

Deck A cannot alone be used for timer-activated playback.

Make sure the cassette holder is closed before setting the timer

If the cassette holder is left open, recording or playback will not activate at the desired time

Maintenance

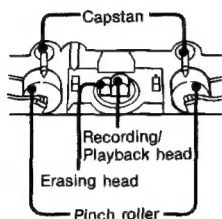
Cleaning the Heads and Tape Path (both decks)

Clean all surfaces over which the tape travels after every 10 hours of operation to guard against:

- low-quality sound
- a decrease in sound level
- excessive wow, flutter or dropout
- incomplete erasure
- recording cannot be made

To obtain high-quality recorded sound, cleaning before every recording is recommended.

Wipe the heads, the pinch rollers and the capstans with a cleaning tip slightly moistened with tape cleaning fluid or alcohol.



Demagnetizing the Heads (both decks)

After 20 or 30 hours of use, or when you notice hiss and/or loss of high frequencies, the residual magnetism built up on the heads should be removed.

- 1 Turn off the power.
- 2 Demagnetize the heads with any commercially available demagnetizer. Refer to the instruction manual of the demagnetizer for detailed instructions.

Cleaning the Cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvents such as alcohol or benzene.

Specifications

Recording system 4-track 2-channel stereo
Fast winding time Approx. 90 sec. (with HF-60 cassette)
Bias AC bias
Signal-to-noise ratio (NAB, at peak level)

Dolby NR switch	OFF	B-TYPE ON	C-TYPE ON
Cassette			
TYPE IV (Sony METAL-ES)	59 dB	67 dB	74 dB
TYPE II (Sony UX-S)	58 dB	66 dB	73 dB
TYPE I (Sony HF-S)	56 dB	64 dB	71 dB

Total harmonic distortion 1.0% (with Sony METAL-ES cassettes)

Frequency response (DOLBY NR OFF)

TYPE IV cassette (Sony METAL-ES)	30–18,000 Hz (± 3 dB) 30–15,000 Hz (0VU recording)
TYPE II cassette (Sony UX-S)	30–17,000 Hz (± 3 dB)
TYPE I cassette (Sony HF-S)	30–15,000 Hz (± 3 dB)

Wow and flutter 0.07% WRMS (NAB)
Inputs

Line inputs (phono jacks)	Sensitivity	77.5 mV (-20 dB)
	Input impedance	50k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.44 V (-5 dB) at a load impedance 47k ohms
	Load impedance	Over 10k ohms
Headphones (stereo phone jack)	Output level	0.3 mW at a load impedance of 32 ohms

General

Power requirements 120 V AC, 60 Hz
Power consumption 29 Watts
Dimensions Approx. 430 × 135 × 285 mm (w/h/d)
(17 × 5 3/8 × 11 1/4 inches) including projecting parts and controls
Weight Approx. 5 kg (11 lbs 1 oz)

Supplied accessory

Audio connecting cord (2)

Design and specifications subject to change without notice.

Troubleshooting Guide

The following trouble checks will help you correct the most common problems encountered with your tape deck. Should any problems persist after you have made these checks, consult your nearest Sony dealer.

Before proceeding with these trouble checks, verify:

- The power cord is firmly connected.
- Amplifier connections are firmly made.
- Heads, capstans and pinch rollers are clean.
- The amplifier controls and switches are set correctly.

Function buttons and tape transport problems		
Symptom	Cause	Remedy
The function buttons do not activate.	Cassette holder is not fully closed.	Close the holder completely.
	Cassette is not properly inserted.	Insert cassette correctly.
	Button was pressed immediately after power was turned on.	Wait until the II indicator stops blinking.
Playback or recording begins just as the power is turned on.	The TIMER switch is not set to OFF .	Set the TIMER switch to OFF .
● button does not activate.	No cassette in the holder.	Insert a cassette.
	Tab has been removed from the cassette.	Cover the hole with plastic tape (page 13).
Automatic shut-off mechanism activates before the tape comes to its end.	Tape is slack.	Take up the tape slack.
	Cassette shell is deformed.	Use another cassette.
	The Memory Play function is activated.	Press the MEMORY button to deactivate the function.
Excessively loud tape transport noise during fast winding.	This noise is caused by the cassette and does not signify a mechanical problem.	—
The ▲ eject button does not function.	This occurs when there is a power failure or when the power cord is disconnected during playback or recording.	Turn on the power once more.

Troubleshooting Guide

Recording and playback problems

Symptom	Cause	Remedy
Recording or playback cannot be made or there is a decrease in sound level.	Recording/playback and erase heads are either dirty or magnetized.	Clean or demagnetize the heads.
	Improper connection.	Make connections properly (page 4).
	Improper setting of the amplifier controls.	Set the amplifier controls to the appropriate positions.
Excessive wow, flutter or dropout.	Head, capstan or pinch roller is dirty.	Clean in accordance with instructions shown on page 18.
Incomplete erasure.	Erase head is dirty.	Clean the erase head.
Increased noise or poor reproduction in high frequencies.	Head is magnetized.	Demagnetize the head.
Unbalanced tone in high frequencies.	Improper setting of the $\square\square$ NR switch.	During playing back, set the switch to the same position used in recording.
	The unit is placed near a television set.	Move the deck away from the television set.
The desired selection cannot be located even if you activate the AMS.	There is noise in the space between selections.	Rerecord the tape if you can, and insert a blank space of four seconds using the \bigcirc button.
	The space is less than four seconds long.	Press \bigcirc to insert a longer blank space.
Playback begins in the middle of a selection when the AMS or Blank Skip function is activated.	The selection contains one of the following: — a long pause in the music — a passage of low frequencies or very low volume — a gradual increase or decrease in volume	Press the \blacktriangleleft or \blacktriangleright button again.

Noise

Symptom	Cause	Remedy
Hum noise.	The unit is stacked on or under the amplifier.	Separate the unit.
Noise is recorded.	Recording was made near equipment such as a television set or a color monitor, and interference has affected the recording on the tape and the Dolby NR system.	Move the unit away from the television set or color monitor.